

STUDIES IN ICHNANTHUS (GRAMINEAE). III.
ADDITIONAL NEW TAXA IN SECTION
FOVEOLATA

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ICHNANTHUS BREVIACUMINATUS K. E. Rogers, sp. nov.

Internodi et nodi plus minusue papilloso-pilosi. Vaginae plus minusue pubescentes, pilos graciles se extendentes ascendentesque e tuberculis gerentes. Ligula membraneo-ciliata ferme 2.0 mm longa. Laminae maxima ex parte 2-4 cm longae, 0.8-1.5 cm latae, late lanceolatae, apice subito et breviter acuminatae; utrisque paginis pubescentes atque longiores et molles e tuberculis pilos gerentes. Paniculae terminales in pedunculos gracilis. Spiculae 3.5-3.9 mm longae, in glumas et lemma inferius pubescentes cum mollibus et brevibus e tuberculis pilis. Rachilla-appendiculae 0.8-1.0 mm longae.

Plants slender, trailing, branching, rooting at the lower nodes, with slender stilt roots 10 cm or more long. Internodes and nodes more or less papillose-pilose. Sheaths 1/4-1/2 the length of the internodes, mostly 0.8-2.7 cm long, more or less pubescent with slender, spreading-ascending tubercle-based hairs; collar pilose. Ligule membranous-ciliate, about 2.0 mm long. Blades mostly 2-4 cm long, 0.8-1.5 cm wide, broadly lanceolate, the apex abruptly and short acuminate, the base inequilaterally cordate, pubescent on both surfaces with rather long, soft tubercle-based hairs. Panicles terminal and axillary; terminal panicles 4-6 cm long, 3-4.5 cm wide, on slender peduncles as much as 15 cm long, the primary branches spreading-ascending, as much as 4.5 cm long, the secondary branches to 1.5 cm long; axillary panicles well exerted on slender peduncles as much as 8 cm long; rachises and pedicels scabridulous on the angles and sparsely pilose; pulvini pilose. Glumes and lower lemma membranous, the margins narrowly hyaline. Spikelets 3.5-3.9 mm long, elliptic-acuminate, tinged with purple, pubescent on the glumes and lower lemma with soft, short tubercle-based hairs. First glume ovate-acuminate, 2.5-2.9 mm long, about 3/4 the length of the spikelet, 3-nerved. Second glume elliptic-ovate, acuminate, 3.4-3.6 mm long, 5-nerved. Lower floret apparently sterile. Lower lemma 3.1-3.3 mm long, elliptic, the apex somewhat hooded and hyaline, 5-nerved. Lower palea 2.2-2.4 mm long, about 3/4 the length of the lower lemma, the margins minutely ciliate. Upper floret elliptic-acute, 2.0 mm long, 0.8-0.9 mm wide, on a short stipe about 0.2-0.3 mm long, when mature rotated 90 degrees in the spikelet. Rachilla-appendages 0.8-1.0 mm long.

Holotype: Petropolis, Rio de Janeiro, collected by Glaziou, no. 9052, January 28 (?), 1877 (US, no 1127458; isotype at MO, P).

The specific name given to this taxon is descriptive of the short-acuminate apex of the leaf-blades.

This species is distinguished by the presence of tubercle-based hairs on the culms, leaves, sheaths, and spikelets, and by the short leaves which are abruptly and short acuminate.

ICHNANTHUS EXILIS K. E. Rogers, sp. nov.

Plantae elongatae, exiles. Ligula membraneo-ciliata circa 0.6 mm longa, cilia perexigua. Laminae anguste lanceolatae, longo-acuminatae. Paniculae terminales axillariaeque sparsim florentes; pedunculi terminales usque ad 20 cm longi; paniculae axillariae paucae, ex parte inclusae. Spiculae 4.0-4.3 mm longae. Rachilla-appendiculae circa 0.9 mm longae.

Plants elongate, slender, trailing, rooting at the lower nodes. Internodes more or less pilose in lines; nodes pilose. Sheaths papillose-pilose along the margins, mostly 1-5 cm long, the lowermost equalling, the middle and upper about 1/2, the length of the internodes. Collar pilose. Ligule membranous-ciliate, about 0.6 mm long, the cilia minute. Blades narrowly lanceolate, long acuminate, asymmetrical, 3-7 cm long, 0.5-0.8 cm wide, the upper surface somewhat scabridulous on the nerves and papillose-pilose in an area just above the ligule, the lower surface glabrous. Panicles terminal and axillary, sparsely flowered, tinged with purple; terminal panicles two from the uppermost sheath, 5-7.5 cm long, 2-5.5 cm wide, the branches alternate, spreading-ascending, as much as 4.5 cm long; terminal peduncles slender, elongate, glabrous, as much as 20 cm long; axillary panicles few, partly included; rachises scabridulous on the angles; pulvini more or less pilose. Spikelets tinged with purple, elliptic-acuminate, 4.0-4.3 mm long, with a few hairs along the margin of the first glume. First glume ovate, attenuate into a slender tip, slightly shorter than to exceeding the lower floret, 3.3-3.7 mm long, 3-nerved. Second glume elliptic-ovate, acuminate, 3.4-3.8 mm long, 5-nerved. Lower floret staminate, the stamens 1.2-1.5 mm long. Lower lemma elliptic-acute, 3.1-3.3 mm long, 5-nerved. Lower palea elliptic-acute, 2.8-3.3 mm long, 0.9 equalling the length of the lower palea, the margins ciliolate. Upper floret narrowly elliptic, acute, 2.5 mm long. Rachilla-appendages about 0.9 mm long.

Holotype: Currityba in silvula, Parana, Brazil, collected by P. Dusen, no. 7907, March 16, 1909 (US, no. 601139; isotype at NY).

I. exilis is distinguished by the slender, elongate culms, the small ligule with short cilia, the rather small, narrow

blades, the sparsely flowered terminal panicles on long peduncles, and the presence of axillary panicles.

The specific epithet of this species is descriptive of the slender appearance of the plant.

ICHNANTHUS PAPILLATUS K. E. Rogers, sp. nov.

Vaginae papilloso-pilosae pilos usque ad 2.5 mm longos gerentes, vel etiam vaginae supremae glabrescentes. Ligula membraneo-ciliata, 1.0-1.5 mm longa. Laminae ovatae brevius acuminatae, satius dense in utraque paginas papilloso-pilosae, pagina inferior pubescens atque tactu mollis, utraeque paginae plus minusue conspicuas venas decussatas monstrantes. Spiculae 4.0-4.3 mm longae, glabrosae. Prima gluma $\frac{3}{4}$ flosculi inferioris longitudine usque ad aequalitatem.

Plants extensively branching, rooting at the nodes. Internodes obtuse-angular, pubescent with soft, tubercle-based hairs; nodes similarly pubescent. Sheaths about $\frac{1}{3}$ - $\frac{1}{2}$ the length of the internodes on the main culms, mostly 1.0-3.5 cm long, papillose-pilose with hairs as much as 2.5 mm long, or the uppermost sheaths glabrescent; collar pilose. Ligule membranous-ciliate, 1.0-1.5 mm long, the membrane 0.4-0.5 mm long. Blades ovate, short-acuminate, asymmetrical, 2.5-5.5 cm long, 1.0-1.3 cm wide, rather densely papillose-pilose on both surfaces, the upper surface more or less scabrous on the nerves, the pubescence of the lower surface soft to touch, both surfaces with more or less conspicuous cross-veins. Panicles terminal and axillary; terminal panicles 5-6 cm long, 1.5-2.5 cm wide, well exerted on peduncles as much as 12 cm long, the branches appressed-ascending, the lower branches as much as 1 cm long; rachises more or less short pubescent and scabridulous on the angles; pulvini short pilose; axillary panicles 2-3 from the uppermost sheaths. Pedicels scabridulous on the angles, the longer 2.0-2.7 mm long, the shorter 0.5-0.9 mm long. Spikelets 4.0-4.3 mm long, green, glabrous, elliptic-acuminate. Glumes and lower lemma membranous, the upper portions somewhat scabridulous, the margins narrowly hyaline. First glume 3.0-3.8 mm long, ovate, long acuminate, $\frac{3}{4}$ the length of the lower floret to equalling it, 3-nerved, the midnerve scabrous. Second glume 3.7-4.0 mm long, ovate-elliptic, short acuminate, 5-nerved. Lower floret staminate, the stamens 1.2 mm long. Lower lemma 3.3-3.5 mm long, elliptic, cucullate, 5-nerved. Lower palea 2.6-2.8 mm long, 0.8 mm wide, 0.8-0.9 the length of the lower lemma, the nerves ciliate above. Upper floret 2.1-2.2 mm long, 0.9 mm wide, narrowly elliptic-acute, on a stipe about 0.2 mm long. Rachilla-appendages 0.7-0.8 mm long.

Holotype: Vicinity of Puyo (Eastern foothills of the Andes), altitude 750-1000 meters, Napo-Pastaza, Ecuador, by Alexander F.

Skutch, no. 4412, August 1939 (NY; isotype US).

Additional specimens examined: British Guiana: Upper Mazaruni River, Imbaimadai Savannas, Maguire and Fanshawe 32278 (NY). Brazil: São Paulo: Morro dos Pedras, Brade 7838 (R).

The specific epithet given to this species is descriptive of the rather conspicuous papillae at the base of the hairs on the sheaths, culms, and blades.

ICHNANTHUS PARODII K. E. Rogers var. villosissimus K. E. Rogers, var. nov.

Internodi et nodi papilloso-villosi. Vaginae plus minusue papilloso-villosae pilos extendentes demum ascendentes gerentes; collum villosum. Laminae utrisque paginis papilloso-villosae pilos appressos gerentes. Rachides pilos longos sparsus gerentes; pulvini pilosi. Spiculae per primae glumae margines pilosae vel glabrosae.

Grass perennial. Culms elongate, up to 2.0 m long, branching, rooting at the nodes; internodes and nodes papillose-villous. Sheaths about 1/3 the length of the internodes, as much as 4.5 cm long, more or less papillose-villous with spreading hairs; collar villous. Ligule membranous-ciliate, 1.5-2.0 mm long, the cilia about 1/2 the length of the ligule. Blades lanceolate-acuminate, 5-9 cm long, 1.2-2.6 cm wide, thinnish, papillose-villous on both surfaces with more or less appressed hairs, margins scabrous. Panicles 6-10 cm long, 3-7 cm wide, the branches appressed to erect-spreading; rachises scabridulous and with scattered long hairs; pulvini pilose. Pedicels scabridulous and with a few long hairs, the longer 0.5-0.8 mm long, the shorter 1.7-2.2 mm long. Spikelets paired and solitary, 3.7-4.3 mm long, elliptic-acuminate, pilose along the margins of the first glume or glabrous, green and more or less tinged with purple. Glumes and lower lemma membranous, the margins narrowly hyaline. First glume 3.0-3.6 mm long, ovate-acuminate, short pointed, about 0.8 the length of the spikelet, 3-nerved. Second glume 3.6-4.0 mm long, elliptic-ovate, acuminate, 5-nerved. Lower lemma 2.9-3.2 mm long, elliptic, the apex somewhat hooded, 5-nerved. Lower palea 2.1-2.3 mm long, 0.6-0.8 mm wide, oblong-elliptic, obtusish, 2/3-3/4 the length of the lower lemma. Upper floret 2.0-2.1 mm long, 0.8 mm wide, elliptic-acute. Rachilla-appendages about 0.8 mm long.

Holotype: Municipio St. Cruz, altitude 100 meters, Rio Grande do sul, Brazil, collected by Jürgens, no. 372, December 1909 (W- no. 41864).

Additional specimens examined: Brazil: Minas Gerais: Vicosas, Kuhlman 1957 (IAN). Rio Grande do Sul: Porto Novo,

Padre Canisio 1021 (R, US); Orth 2723 (US). Rio de Janeiro: Terezopolis, Sam paio 2598 (R). Santa Catarina: Municipio de Chapecó, Vila Peperí, Rambo 2723 (MO).

ICHNANTHUS PETRAEUS K. E. Rogers, sp. nov.

Internodi papilloso-pilosi maxime ex parte 1-4 cm longi. Vaginae maxima ex parte 1 cm vel minores, supremae tamen usque ad 2.5 cm longae. Laminae anguste ovatae, acutae, 2.5-4.0 cm longae, 0.2-0.6 cm latae, pagina superior papilloso-pilosa, pagina inferior molliter pilosa. Spiculae 4.0-4.3 mm longae. Glumae plus minusve se extendentes, pubescentes cum mollibus etuberculis pilis. Rachilla-appendiculae circa 0.6 mm longae.

Plants slender, profusely branching, elongate, trailing, rooting at many lower nodes, 130 cm or more long, with ascending flowering branches 20 cm or more tall. Internodes obtuse-angular, papillose-pilose, mostly 1-4 cm long; nodes papillose-pilose. Sheaths 1/3-1/2 the length of the internodes on the main culms, shorter than to exceeding the internodes on the branches, more or less spreading papillose-pilose, mostly 1 cm or less in length or the uppermost as much as 2.5 cm long; collar pilose. Ligule membranous-ciliate. Leaves narrowly ovate, acute, inequilateral, 2.5-4.0 cm long, 0.2-0.6 cm wide, the upper surface papillose-pilose, more or less scabridulous on the nerves, the lower surface softly pilose. Panicles terminal and axillary, sparsely flowered, on peduncles as much as 7 cm long; terminal panicles as much as 3.5 cm long and 1.5 cm wide, the primary branches alternate, as much as 1.5 cm long; axillary panicles 1-3 from the uppermost sheaths. Rachises and pulvini pilose. Pedicels short pilose, the shorter 0.3-0.5 mm long, the longer 1.5-2.0 mm long. Spikelets 4.0-4.3 mm long, elliptic-acuminate, the glumes more or less spreading pubescent with soft tubercle-based hairs. First glume 2.7-3.3 mm long, 2/3-3/4 the length of the spikelet, ovate-acuminate, the midnerve extended into a point, 3-nerved. Second glume 3.9-4.1 mm long, ovate-acuminate, 5-nerved. Lower lemma 3.7-4.0 mm long, elliptic-ovate, 5-nerved. Lower palea 2.6-2.8 mm long, 2/3-3/4 the length of the lower lemma. Upper floret 2.2-2.3 mm long, 0.8 mm wide, narrowly elliptic-acute, on a short stipe about 0.1 mm long. Rachilla-appendages about 0.6 mm long.

Holotype: Rocky cliff, altitude 590 meters, Colonia Perené, Junín, Peru, by A. S. Hitchcock, no. 22069, October 21, 1923 (US, no. 1163640; isotype GH).

The specific name of this species refers to the rock-dwelling habitat of the type specimen.

ICHNANTHUS SABULOSUS K. E. Rogers, sp. nov.

Plantae satius graciles. Internodi et nodi pubescentes cum mollibus et brevibus e tuberculis pilis. Vaginae maxima ex parte 0.5-2.5 cm longae, plus minusue papilloso-pilosae cum pilis se extendentibus vel vaginas supremas glabrescentes gerentes. Laminae anguste ovatae, pagina superior pubescens cum brevibus plus minusue erectis e tuberculis pilis; pagina inferior satius dense pubescens. Paniculae terminales longo-exsertae, paucae tamen florentes. Spiculae 4.3-5.1 mm longae, pubescentes in glumas cum brevibus pilis. Rachilla-appendiculae 0.8-0.9 mm longae.

Plants rather slender, branching extensively, creeping, with slender adventitious roots, the ascending flowering branches as much as 25 cm or more tall. Internodes and nodes pubescent with soft short tubercle-based hairs. Sheaths 1/3 to 1/2 the length of the internodes on the principal culms, shorter than to exceeding the sheaths on branches, mostly 0.5-2.5 cm long, more or less papillose-pilose with spreading hairs or the uppermost sheaths glabrescent; collar pubescent. Ligule membranous-ciliate, 0.3-0.6 mm long. Blades narrowly ovate, short acuminate, asymmetrical, the upper surface pubescent with short, more or less erect tubercle-based hairs, the nerves scabridulous, the lower surface rather densely pubescent with short soft hairs. Panicles terminal and axillary; terminal panicles long-exserted, few flowered, 2-4 cm long, as much as 3 cm wide, mostly three from the uppermost sheath; axillary panicles mostly 2-3; primary panicle branches 1-2 cm long; peduncles as much as 16 cm long, pubescent; rachises and pulvini short pubescent. Pedicels short pubescent, the shorter 0.5-1.5 mm long, the longer as much as 3.5 mm long. Spikelets 4.3-5.1 mm long, sparsely pubescent on the glumes with soft short hairs, at least along the margins. Glumes and lower lemma membranous, the margins narrowly hyaline. First glume 3.5-3.8 mm long, about 3/4 the length of the spikelet, narrowly ovate, the midnerve extended into a point, 5-nerved. Second glume elliptic-acuminate, 4.4-4.8 mm long, 5-nerved. Lower lemma 3.8-4.2 mm long, 5-nerved. Lower palea 2.5-3.0 mm long, 0.6-0.7 mm wide, the nerves ciliolate on the upper half. Upper floret 2.7-3.0 mm long, 0.8-1.0 mm wide, narrowly elliptic-acute. Rachilla-appendages 0.8-0.9 mm long.

Holotype: Forested island near Base Camp along Río Tirica, altitude 515 meters, locally frequent, creeping on sandy semi-open areas, Chimantá Massif, Torono-tepuí, Estado Bolívar, Venezuela, by Steyermark and Wurdack, no. 1378, March 13, 1955 (NY).

The specific epithet given to this species refers to the sandy habitat of the type specimen.

This species is distinguished by the slender growth form, the pubescent culms, the narrowly ovate pubescent blades, the sparsely flowered panicles on elongate peduncles, and the

comparatively long, pubescent spikelets.

ICHNANTHUS SUCRENSIS K. E. Rogers, sp nov.

Plantae graciles, plus minusue manifeste ramosae usque ad 200 cm aut longiores. Laminae lanceolato-acuminatae; pagina superior pilos paucos et rigidos e tuberculis per margines prope basim monstrans necnon nervos plus minusue scabrosos; pagina inferior mollis brevis pubescens vel ferme glabra. Paniculae terminales usque ad 10 cm longae, 3-5 cm latae, in pedunculos graciles et elongatos usque ad 20 cm longos; rami primarii usque ad 6 cm longi; interdum nonnullae paniculae axillariae in pedunculos graciles et elongatos. Spiculae 3.8-4.9 mm longae inter nervos papilloso-pilosae sparsim se extendentes.

Plants slender, trailing, rooting at the lower nodes, more or less conspicuously branched, as much as 200 cm or more long, with slender stilt roots as much as 30 cm long. Internodes obtuse-angular, somewhat purplish, sparsely papillose-pubescent or essentially glabrous, as much as 15 cm long; nodes pubescent or glabrous. Sheaths about 1/4 to 1/2 the length of the internodes, sparsely pilose or glabrous except along the margins, mostly 2-5 cm long; collar pubescent. Ligule membranous-ciliate, about 1.5-2.5 mm long. Blades lanceolate-acuminate, 5-9 cm long, 1.0-1.5 cm wide, the base inequilaterally subcordate, the upper surface with a few stiff tubercle-based hairs along the margins near the base, the nerves more or less scabrous, the lower surface soft short pubescent or essentially glabrous, faintly reticulate-veined. Panicles terminal and axillary; terminal panicles as much as 10 cm long, 3-5 cm wide, on slender elongate peduncles as much as 20 cm long, the primary branches slender, alternate, as much as 6 cm long, the secondary branches short and appressed; axillary panicles sometimes several, similar to the terminal panicles, on slender, elongate peduncles; rachises more or less scabridulous on the angles; pulvini sparsely pilose. Pedicels more or less scabridulous on the angles, the shorter mostly 1.0-1.5 mm long, the longer 3.0-4.5 mm long. Spikelets 3.8-4.1 mm long, narrowly elliptic, sparsely spreading papillose-pilose between the nerves. First glume and lower lemma membranous, the margins narrowly hyaline. First glume 2.7-2.9 mm long, ovate-acuminate, 0.7-0.8 the length of the spikelet, 3-nerved. Second glume 3.8-3.9 mm long, ovate-elliptic, short acuminate, 5-7 nerved. Lower floret staminate, the stamens 1.3-1.5 mm long. Lower lemma 3.2-3.3 mm long, elliptic-acute, 5-7 nerved. Lower palea 2.3-2.5 mm long, 0.8-0.9 mm wide, elliptic-acute, about 3/4 the length of the lower lemma, the margins minutely ciliate except near the base. Upper floret 1.8-2.2 mm long, 0.8-1.0 mm wide, elliptic-acute, on a short stipe about 0.2 mm long, when mature rotated 90 degrees in the spikelet. Rachilla-appendages 0.8-0.9 mm long.

Holotype: En campos de Los Altos, Sucre, Miranda, Venezuela, collected by Tamayo, no. 2150, 1942 (US, no 1819835; isotype VEN).

Additional specimens examined: Venezuela: Miranda: Los Teques, Chase 12306 (NY); N. of Los Teques, Chase 12317 (US, VEN); Sebastopol, Chase 12297 (US, VEN). Bolivar: Tamayo 2920 (US).

This species is distinguished by the elongate culms with slender stilt roots, the usually scabrous upper leaf surface, the terminal panicles on long slender peduncles, and the sparsely spreading papillose-pilose spikelets.

The specific epithet refers to the location at which the holotype was collected.

ICHNANTHUS SWALLENII K. E. Rogers, sp nov.

Laminae ad basim ciliata, pagina superior in nervos scabridulosa, pagina inferior glabrosa vel sparsim puberulents, venas reticulatas gerens. Spiculae 3.7-4.3 mm longae, glabrosae vel perparum pubescentes pilos e tuberculis delicatos in primam atque alteram glumam gerentes. Flosculus superior 1.8-2.0 mm longus. Rachilla-appendiculae 0.8-0.9 mm longae.

Culms slender, branching, obtuse-angled, rooting at the nodes, with ascending flowering branches; internodes and nodes sparsely papillose-pubescent with soft hairs or nearly glabrous. Sheaths 1/3-1/2 the length of the internodes, up to 3.5 cm long, glabrous except for the ciliate margins or the lower and those of branches soft papillose-pilose; collar pubescent or glabrous. Ligule membranous-ciliate, 1.5-2.0 mm long. Blades asymmetric, narrowly ovate, acuminate, 2.0-8.5 cm long, 0.8-2.2 cm wide, papillose-ciliate at the base, the upper surface scabridulous on the nerves, the lower surface glabrous or sparsely puberulent, reticulate-veined. Panicles terminal and axillary; terminal panicles 2-3 from the terminal sheath, 5-9 cm long, as much as 8 cm wide, rather sparsely flowered, well exerted; peduncles up to 13 cm long; primary branches alternate, spreading-ascending, the lower to 5 cm long; secondary branches appressed, to 2.0 cm long; axillary panicles 2-3 from the upper sheaths; rachises scaberulous; pulvini sparsely pubescent. Pedicels scaberulous, the longer 2.5-3.0 mm long, the shorter 0.7-1.0 mm long. Spikelets paired and solitary, 3.7-4.3 mm long, elliptic-acuminate, sparsely pubescent with soft tubercle-based hairs on the first and second glume or glabrous, green and sometimes lightly-tinged with purple. Glumes and lower lemma membranous, the margins narrowly hyaline. First glume 2.6-3.1 mm long, ovate, short pointed, about 3/4 the length of the spikelet, 3(-5)-nerved. Second glume 3.5-4.0 mm long, elliptic-ovate, acuminate,

5(-7)-nerved. Lower floret staminate, the stamens 1.1-1.3 mm long. Lower lemma 2.9-3.5 mm long, elliptic, the apex somewhat hooded and hyaline, 5-nerved. Lower palea 2.2-2.4 mm long, about 0.7 mm wide, elliptic-oblong, the apex obtusish, the nerves scabridulous. Upper floret 1.8-2.0 mm long, elliptic-acute, on a stipe about 0.3 mm long. Upper stamens 1.1 mm long. Rachilla-appendages 0.8-0.9 mm long.

Holotype: Capão Bonito in silva primæua, Parana, Brazil, collected by P. Dusén, no. 17997, March 24, 1916 (F, no. 572395; isotype at MO).

Additional specimens examined: Brazil: Rio Quebra Anzal, between Urubie and Cambuhy, Dorsett and Popenoe 1636 (US). Parana: Campo Morãe, Swallen 9013 (US); Capão Bonito, Dusen 16940 (GH); Volta Grande, Dusén 14435a (F, GH). Minas Geraes: Pocos de Caldas, Villa Quisiana, Chase 10681 (US); Serra do Cipó, 110Km NE of Bello Horizonte, Chase 9196 (F, GH). Rio Grande do Sul: Pelotas, Horta Florestal, Swallen 9195 (US). Rio de Janeiro: Paineiros, Corcovado, vic. of Rio de Janeiro, Chase 8184 (F, GH, MO, NY, US).

This species is named for Jason R. Swallen, formerly Curator of Grasses, Smithsonian Institution, Washington, D. C.

ICHNANTHUS TIPUANIENSIS K. E. Rogers, sp. nov.

Vaginae plerumque 1-3 cm longae, plus minusue se extendentes papilloso-pilosae. Ligula membraneo-ciliata, 1.3-2.3 mm longa. Laminae ovatae, acuminatae, plus minusue papilloso-pilosae vel utrisque paginis pubescentes. Paniculae magis dense florentes. Spiculae 3.4-4.0 mm longae, glumae sparsim pubescentes pilos delicatos breves e tuberculis gerentes. Flosculus superior 2.0-2.1 mm longus. Rachilla-appendiculae 0.7 mm longae.

Plants spreading, rooting at the nodes, branching, with ascending branches to 50 cm or more in length. Culms obtuse-angular, 100 cm or more in length, more or less pubescent with short, soft tubercle-based hairs. Sheaths 1/3-1/2 the length of the internodes, mostly 1-3 cm long, more or less spreading papillose-pilose or the upper glabrescent; collar pubescent. Ligule membranous-ciliate, 1.3-2.3 mm long. Blades 2.0-8.0 cm long, 0.7-2.3 cm wide, asymmetrical, ovate, acuminate, more or less papillose-pilose or pubescent on both surfaces. Panicles terminal and axillary, rather densely flowered; terminal panicles mostly paired, one long and one short, 3-7 cm long, 2-6 cm wide, the lowest primary branches alternate, 3-5 cm long, the middle and upper branches opposite to subverticillate, the secondary branches to 1.5 cm long; axillary panicles 2-3 from the upper sheaths, similar to the terminal panicles; peduncles as much as 16 cm long, papillose-pubescent; rachises scabridulous and more

or less short pubescent; pulvini pilose. Pedicels scabridulous, the shorter 0.2-0.5 mm long, the longer 1.2-2.5 mm long. Spikelets paired and solitary, 3.4-4.0 mm long, the glumes sparsely pubescent with soft short tubercle-based hairs. Glumes and lower lemma membranous, green tinged with purple, the margins narrowly hyaline. First glume 2.3-3.3 mm long, ovate, short-pointed, 0.65-0.8 the length of the spikelet, 3-nerved. Second glume 3.5-3.7 mm long, elliptic-ovate, acute, 5-nerved. Lower floret staminate, the stamens 1.2-1.3 mm long. Lower lemma 3.0-3.3 mm long, elliptic, the apex hyaline and somewhat hooded, 5-nerved. Lower palea 2.2-2.5 mm long, 0.6-0.8 mm wide, about 0.7 the length of the lower lemma, elliptic-oblong, the apex obtusish and erose, the margins scabridulous. Upper floret 2.0-2.1 mm long, about 0.8 mm wide, elliptic-acute, on a short stipe about 0.2 mm long. Rachilla-appendages 0.7 mm long.

Holotype: Hacienda Simaco sobre el Camino a Tipuani, region subtropical, altitude 1400 m, La Paz, Bolivia, collected by Otto Buchtien, no. 5322, 1920 (GH; isotypes at IAN, MO, NY).

Additional specimens examined: Bolivia: Region de Mapiiri, San Carlos, Buchtien 6(GH., NY, US); Chulumani, Brooke 6534 (F); Sur-Yungas, Chulumani, Hitchcock 22670 (US); La Paz, Hacienda Simaco sobre el camino a Tipuani, Buchtien 5321 (NY, US).

The specific epithet is derived from the geographical name Tipuani.